

### **REMARKS/ARGUMENTS**

This Preliminary Amendment is being submitted with a Request for Continued Examination and in response to the final Office Action. In the final Office Action, the Examiner rejects Claims 1-4 and 22-36 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,732,398 to Tagawa in view of "Red Roof Inns" article and "Discounting in the Hotel Industry" article to Hanks et al. Claims 5-7, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tagawa, Red Roof, and Hanks and further in view of U.S. Patent No. 5,404,291 to Kerr et al. Finally, Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tagawa, Red Roof, Hanks, and Kerr and further in view of U.S. Patent No. 4,775,936 to Jung et al.

As explained more fully below, the pending claims of the present application are patentably distinguishable from the cited references. Independent Claims 1, 22, and 36 have been amended, and dependent Claims 37-40 have been added. Claim 4 has been canceled, and Claim 5 has been amended for clarification. In light of the amendments and subsequent remarks, Applicant respectfully requests reconsideration and allowance of the claims.

Independent Claims 1, 22, and 36 generally recite determining, based at least partially on received guest information, a predetermined category of guests within which the first guest can be classified, wherein the predetermined category of guests includes guests having similar guest profile information. In addition, independent Claims 1, 22, and 36 recite determining, based at least partially on a received room request, a predetermined category of room from which the room request can be satisfied such that a room rate for the guest is determined based on the predetermined category of guests and further based on a forecast of demand for a room from the predetermined category of room using historical data.

Independent Claims 1, 22, and 36 have been amended to recite accessing an inventory of hotel rooms that is organized as a hierarchal combination of a plurality of attributes associated with a room and determining whether a room satisfying at least one room attribute in the room request is available within the inventory of rooms based on the attributes associated with the room. Thus, the claimed invention utilizes a hierarchal arrangement of attributes to allocate resources among the guests. As disclosed on pages 29-32 and Figure 4 of the present

application, an Attribute Inventory System (AIS) utilizes a hierarchal organization of attributes such that a first combination of attributes includes a second combination of attributes, and the second combination of attributes includes a third combination of attributes. In general, the first combination of attributes is less specific than the second combination of attributes, and the second combination of attributes are less specific than the third combination of attributes. For example, the first combination of attributes could be rooms having an ocean view, the second combination of attributes could be non-smoking rooms having an ocean view, and the third combination of attributes could be non-smoking rooms having an ocean view and king size bed. When a guest requests a room, the claimed invention determines whether a room including one or more attributes specified by the guest is available based on the attributes in the inventory.

Turning to the references cited in the final Office Action, Tagawa discloses a self-service system for selling travel-related services or products by means of an interactive travel service system. The system described in Tagawa includes a self-service method of selling lodging bookings for a destination area. The kiosk system queries a user to select a destination area, then a calendar screen will appear where the user is requested to select the check-in and check-out dates. The user is then queried as to whether he or she has a hotel preference. If so, the system presents a listing of all lodging choices. If not, the system then queries the user as to the type of lodgings desired in accordance with a desired lodging category such as: budget, mid-range, or deluxe. After the user selects one of the categories, the system searches the hotel inventory database and its memory for availability or, alternatively, the system checks with hotel reservation systems in real time for availability. The system then presents a recommended choice for an available lodging booking to the user. After the selection has been made, the system assists the user in the hotel reservation and confirmation of the reservation.

The Red Roof Inn article discloses a revenue management system that uses current and historical occupancy levels to forecast demand for a given room on a given day. The system then provides the forecast of demand to the manager of the Inn so that the manager can determine how to sell the rooms in order to maximize revenue.

In addition, the Hanks article discloses discounting in the hotel industry and using yield management to control inventory. The Hanks article discloses that ideal conditions for

implementing yield management include low variable costs, high fixed costs, perishable inventory, variable demand patterns, ability to forecast future demand, and ability to segment customers based on their varying needs, behavior, and willingness to pay. In addition, the Hanks article discloses that revenue may be maximized by separating customers and charging them different rates based on their different needs and behaviors. For example, travelers may be split into leisure travelers and business travelers having different buying traits (e.g., unwilling make advance commitments or high quality level). Moreover, the Hanks article discloses that different approaches for rate setting include one rate for all rooms, rates set by room type, or rates with "fenced" discounts. Fenced discounts relate to creating rules or restrictions that segment customers based on their needs, behavior, and willingness to pay (e.g., lower rate in exchange for flexible schedule).

Kerr discloses an inventory control process for reservation systems. In particular, Kerr discloses algorithms used to implement the reservation system, wherein the algorithms employ a set of matrix data arrays and a set of rules based on the matrix arrays. Each matrix array includes "i" rows representing rate-categories and "j" columns representing room types. Different arrays exist for different inventory dates and may be differently dimensioned.

Jung discloses an overbooking system for determining a recommended overbooking level for a scarce resource such as seats on an aircraft. The overbooking level is determined using past history of passenger traffic on each aircraft and calculated as a function of three intermediate booking level calculations.

None of the cited references, taken alone or in combination, teaches or suggests accessing an inventory of hotel rooms that is organized as a hierarchal combination of a plurality of attributes associated with a room and determining whether a room satisfying at least one room attribute in the room request is available within the inventory of rooms based on the attributes associated with the room, as recited by independent Claims 1, 22, and 36. In particular, Tagawa only discloses accessing an inventory database to determine availability but does not otherwise disclose the organization of attributes within the inventory database. In fact, the Examiner acknowledges in the final Office Action with respect to dependent Claim 5 that Tagawa "does not specifically disclose the details of organizing hotel inventory based on room attributes."

Moreover, the Red Roof Inn article generally discloses accessing current and historical occupancy levels but does not teach or suggest the organization of attributes within an inventory. The Hanks article shares similar shortcomings, as Hanks only generally discloses perishable inventory in the context of a yield management system. In addition, Hanks discloses “fences” that include rules and restrictions to allow a hotel to segment different rooms to different customers. However, Hanks makes no mention of the organization of attributes within a hotel’s inventory in order to determine the availability of a room for the segmented customers. Furthermore, Jung does not teach or suggest organization of an inventory of rooms at all, let alone a hierarchal combination of attributes within an inventory, as recited by the claimed invention.

Kerr also fails to teach or suggest independent Claims 1, 22, and 36. Namely, Kerr discloses using a matrix of (i) rows representing rate categories and “j” columns representing room types. Thus, the inventory system of Kerr discloses an inventory organized as a matrix rather than a hierarchal combination of attributes. Moreover, Kerr discloses the use of different arrays, such as an array for maximum number of rooms authorized for sale, the number of rooms sold, the number of rooms blocked, but does not teach or suggest that any of the matrices include a plurality of attributes organized as a hierarchal combination.

Thus, the rejection of independent Claims 1, 22, and 36 under 35 U.S.C. § 103(a) is overcome. Because each of the claims that depend from independent Claims 1, 22, and 36 includes at least those recitations of a respective independent claim, Applicants submit that the dependent claims are allowable for at least those reasons described above with respect to independent Claims 1, 22, and 36.

Moreover, Applicants submit that at least dependent Claims 5 and 37-40 are further distinguishable from the cited references. In this regard, Applicants submit that none of the cited references teach or suggest that the inventory of hotel rooms is organized as a plurality of first attribute combinations, second attribute combinations, and third attribute combinations, wherein each first attribute combination comprises at least one second attribute combination and each said second attribute combination comprises at least one third attribute combination, as recited by Claim 5. Similarly, none of the cited references disclose first and second external databases

that are each configured to store an inventory of hotel rooms as a hierarchal combination of a plurality of attributes associated with rooms of the first lodging property, wherein the plurality of attributes include a plurality of first attribute combinations, second attribute combinations, and third attribute combinations, and wherein each first attribute combination includes at least one second attribute combination and each second attribute combination includes at least one third attribute combination, as recited by Claims 37-40. Therefore, Applicants submit that Claims 5 and 37-40 are allowable for at least these additional reasons.

### CONCLUSION

In view of the amendments and remarks presented above, it is respectfully submitted that all of the present claims of the present application are in condition for immediate allowance. It is therefore respectfully requested that a Notice of Allowance be issued. The Examiner is encouraged to contact Applicants' undersigned attorney to resolve any remaining issues in order to expedite examination of the present application.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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